

## Remarks

Claim Rejections under 35 USC 112

Claim 1 is rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter Applicant regards as the invention. Applicant respectfully believes that the current Amendment to claim 1 overcomes this rejection.

Amendments to the Claims

Claims 1, 3, 5-8, 19, 22, 26, 27, and 29-36 are amended to now define an extreme ultraviolet mask blank and the production method of such a mask blank.

Claim 26 features that the sputtering is carried out with a Xenon ion beam at a background pressure between  $1 \times 10^7$  Torr and  $3 \times 10^{10}$  Torr.

Claim 29 features the production method of a phase shift mask blank or an extreme ultraviolet mask blank.

Claim 37 has been amended to include the feature of a curved three grid ion extraction, which is found in the description.

Claim Rejections Under 35 USC 102Patentability of Claim 29 over Mitsui

Claim 29, as amended, defines a phase shift mask or an extreme ultraviolet mask blank that can be manufactured by ion beam sputtering according to claim 1. Mitsui does not teach the process of manufacturing a phase shift mask blank or an extreme ultraviolet mask blank. Applicant respectfully believes that the current Amendment to the claims overcomes Mitsui.

Claim Rejections Under 35 USC 103Patentability of claims 1, 3, 5-8, 19, 22, 26, 27, and 29-36 over Carcia and Kureishi

Becker (H) 02SGL0436CIP USP – US Patent Application 10/777,800  
Amendment (11 pages) in Response to Office Action mailed 08/14/2006 submitted by fax with certification  
on 11/20/2006

Claims 1, 3, 5-8, 19, 22, 26, 27, and 29-36 have been amended to include the feature of an extreme ultraviolet mask blank and the production of such an extreme ultraviolet mask blank. Carcia and Kureishi do not mention an extreme ultraviolet mask blank.

Patentability of claim 26 over Carcia, Kureishi, and Yakshin or Mirkarimi

Claim 26 defines the background pressure during the manufacturing process of a mask blank. Carcia, Kureishi, Yakshin, or Mirkarimi do not disclose the background pressure during the sputter process. Therefore, Applicant respectfully believes that claim 26 is novel and inventive.

Patentability of Claim 37 over Carcia and Kureishi in view of Scott

Claim 37 defines an apparatus for manufacturing a photo mask blank that includes a curved three grid ion extraction assembly.

Carcia and Kureishi teach manufacturing of a photo mask blank by an ion beam. Scott discloses an apparatus for ion beam sputtering. The references cited in the Office Action do not teach an apparatus that includes a curved three grid ion extraction assembly.

Wherefore further consideration and allowance of the claims, as amended, is respectfully requested.

Applicant respectfully believes that the present submission places the claims in condition for allowance.

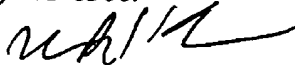
A one-month extension of time in which to respond to the outstanding Office Action is hereby requested. Credit Card Payment Form PTO-2038 is enclosed to cover the prescribed Large Entity one-month extension fee of \$120.

Respectfully submitted,



M. Robert Kestenbaum  
Reg. No. 20,430  
11011 Bermuda Dunes NE  
Albuquerque, New Mexico 87111  
Phone (505) 323-0771  
Fax (505) 323-0865

I hereby certify under 37 CFR 1.8 that this correspondence is being submitted by facsimile transmission to Commissioner for Patents, Alexandria, Va. 22313-1450 on 11/20/2006, fax number (571) 273-8300.



M. Robert Kestenbaum

Becker (H) 02SGL0436CIP USP - US Patent Application 10/777,800  
Amendment (11 pages) in Response to Office Action mailed 08/14/2006 submitted by fax with certification  
on 11/20/2006 11